

REMARKS

I. Introduction

This application is a continuation of pending application serial number 10/199,222, filed July 18, 2002, which is a continuation of application serial number 09/550,371, filed April 14, 2000, now U.S. patent no. 6,464,986 B1.

The title of this application has been replaced by a title more descriptive of the claimed subject matter and a cross reference to the parent applications has been added after the title.

Applicants hereby cancel claims 22-23 without prejudice to further prosecution at a later date.

The amendment to claim 1 ("burn pain") is supported by at least Example 6 on pages 44 of the application.

The amendment to claim 12 ("burn pain" and "botulinum toxin type A") is supported by at least Example 6 on page 44 of the application, and by original claim 5.

New claim 28 ("peripheral administration") is supported by at least original claim 1.

New claim 29 ("intramuscular administration") is supported by at least page 30, lines 1-2 of the specification.

New claim 30 ("into the region of a burn pain") is supported by at least Example 6 on page 44 of the specification.

New claim 31 ("burn pain") is supported by at least Example 6 on page 44 of the specification.

New claim 32 ("method for a burn") is supported by at least Example 6 on page 44 of the specification.

New claim 34 ("botulinum toxin type A) is supported by at least original claim 5.

No new matter is added by any of these claim amendments.

**II. Conclusion**

Examination and allowance of claims 1, 4-5, 9, 12-13 and 28-34 is requested.

Respectfully Submitted,

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**CERTIFICATE OF EXPRESS MAILING UNDER 37 C.F.R. § 1.10**

I hereby certify that this Nonprovisional Patent Application Transmittal Letter, the specified patent application and the documents referred to as enclosed therein are being deposited with the United States Postal Service on this date July 29, 2003 in an envelope as "Express Mail Post Office to Addressee" Mailing Label number EV295683033US addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Susan Bartholomew  
Name of person mailing paper

Date: July 29, 2003

  
Signature of person mailing paper

**MARKED VERSION OF PAGE ONE OF THE SPECIFICATION**

**BURN PAIN TREATMENT BY PERIPHERAL ADMINISTRATION OF A NEUROTOXIN**

by

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**CROSS REFERENCE**

This application is a continuation of application serial number 10/199,222, filed July 18, 2002, which is a continuation of serial number 09/550,371, filed April 14, 2000, now U.S. patent no. 6,464,986 B1, the entire contents of which prior application and patent are incorporated herein by reference in their entireties.

**BACKGROUND**

The present invention relates to methods for treating pain. In particular, the present invention relates to methods for treating pain by peripheral administration of a neurotoxin.

Many, if not most ailments of the body cause pain. Generally pain is experienced when the free nerve endings which constitute the pain receptors in the skin as well as in certain internal tissues are subjected to mechanical, thermal, chemical or other noxious stimuli. The pain receptors can transmit signals along afferent neurons into the central nervous system and thence to the brain.

The causes of pain can include inflammation, injury, disease, muscle spasm and the onset of a neuropathic event or syndrome. Ineffectively treated pain can be devastating to the person experiencing it by limiting function, reducing mobility, complicating sleep, and dramatically interfering with the quality of life.

A muscle spasm can lead to stimulation of mechanosensitive pain receptors thereby causing a sensation of pain. Thus, pain can arise from or be due to a muscle spasm. Additionally, the spasm can indirectly stimulate the pain receptors by compressing onto blood vessels, causing ischemia in the tissue, which in turn releases pain inducing substances that stimulate pain receptors to cause pain sensations. Furthermore, a muscle spasm can cause a localized pH reduction which can be perceived as or which can engender pain signals. Hence, pain can be a secondary effect of a muscle spasm or muscle hypertonicity.

**MARKED UP VERSION OF THE CLAIMS**

1. (currently amended) A method for treating burn pain due to an infection, the method comprising the step of peripheral administration of a botulinum toxin to a mammal, wherein the pain treated is not associated with a muscle spasm.

Claims 2-3 (previously cancelled).

4. (previously amended) The method of claim 1, wherein the botulinum toxin is selected from the group consisting of botulinum toxin types A, B, C<sub>1</sub>, D, E, F and G.

5. (previously amended) The method of claim 1, wherein the botulinum toxin is botulinum toxin type A.

Claims 6-8 (previously cancelled)

9. (original) The method of claim 1, wherein the pain is substantially alleviated for between about 1 month and about 6 months.

Claims 10-11 (previously cancelled)

12. (currently amended) A method for alleviating a burn painneuralgia, the method comprising the step of peripheral administration of a botulinum toxin type A to a human patient, thereby alleviating a burn painneuralgia.

13. (previously amended) The method of claim 12, wherein the botulinum is toxin selected from the group consisting of botulinum toxin types A, B, C<sub>1</sub>, D, E, F and G.

Claims 14-21 (previously cancelled).

Claims 22-23 (cancelled).

Claims 24-27 (previously cancelled).

Claim 28 (new) The method of claim 1, wherein the step of administration of a botulinum toxin is carried out by peripheral administration of the botulinum toxin.

Claim 29 (new) The method of claim 28, wherein the peripheral administration of the botulinum toxin is carried out by intramuscular administration of the botulinum toxin.

Claim 30 (new) The method of claim 29, wherein the intramuscular administration of the botulinum toxin is carried out by intramuscular administration of the botulinum toxin into the region of the burn pain.

Claim 31 (new) A method for treating a burn pain, the method comprising the step of administration of a botulinum toxin to a region of a burn.

Claim 32 (new) The method of claim 33, wherein the botulinum toxin is a botulinum toxin type A.